Sanskruti Jadhav

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github.com/Autonomousanz

Technical Skills

- **Programming languages:** C++, Python, ROS, MATLAB, Shell Scripting, C#
- **Tools/Software:** Docker, Azure Machine Learning & IoT , MLFlow, Git, Jira, Github Actions, terraform
- **Machine Learning Frameworks:** TensorFlow, Keras, PyTorch, Scikit-Learn, OpenAI gym
- **Specialized Skills:** Azure MLOps, Model Optimization, AI System Integration, Data Analysis, Azure IoT edge architecture deployment,Sensor Integration, Sensor Data Analysis (2D and 3D LiDAR, Camera, GNSS, Ultrasonic,CAN signals), Image Processing Analysis, Network

Work Experience

Robotics Computer Vision II Engineer, Honeywell – Pittsburgh,PA Sept 2023 – Current

- Engineered end-to-end MLOps to optimize a custom computer vision solution, leveraging GitHub Actions, Azure to boost model re-training efficiency and accelerate production deployment on Azure IoT Edge.
- Improved ML model performance by 18 percent with synthetic data with Nvidia Isaac Sim and using open-source GenAI model for Depalletizer Robotic Arm application.
- Led 2 interns to develop Proof-of-concept of Deep Reinforcement Learning solution for bin packing problem, OCR for reading labels on boxes.

Autonomous Driving Software Engineer, Clemson University – Greenville, SC Jan 2022 – Aug 2023

- Integrated Autonomy Stack for custom off-road vehicle self-driving prototype with 3D LiDAR, Depth Cameras, GNSS for waypoint navigation in unstructured terrain.
- Developed and tested ROS-based State manager using Autonomy Stack that optimized the vehicle controls.
- Created and Deployed ROS MATLAB interface for real-time vehicle state monitoring and data logging.

Senior Engineer Project Component Manager,Bosch Chassis – India Sept 2018 – June 2021

- Advanced from Graduate Trainee to Senior Engineer by leading APQP processes, resolving quality issues, and developing critical ABS and ESP sensors for OEMs, while enhancing cross-functional collaboration and managing system requirements

Education

Clemson University, MS in Automotive Engineering (GPA: 3.76/4.0) Aug 2021 - Aug 2023

- **Coursework:** Sensor Integration, Artificial Intelligence, Vehicle Autonomy

University of Pune, BE in Mechanical Engineering Aug 2013 – May 2017

Projects

Detect Drivable Area for Inclement Weather conditions GitHub:Detect-Drivable-Area

- Modelled a convolutional neural network for detecting drivable area (segmented) specifically for inclement weather images from BDD100k Dataset.

Autonomous Nav of Turtlebot3 burger robot GitHub: Turtlebot3 Nav

- Developed and demonstrated Turtlebot April tag, line following and stop sign detection tasks using YOLO v3 using camera sensor mounted on the Turtlebot.
- Developed and Demonstrated person following ability of the Turtlebot using 2D LiDAR and camera depth data.

Certifications

- MathWorks Excellence in Innovation program Accepted solution to project 209 GIT:Nav-in-Rough-Terrain YouTube:Autonomous Navigation of Vehicle in Rough terrain
- Machine Learning Specialization Coursera by Andrew Ng

Publications

- **Publications:** "**Containerization Approach for High-Fidelity Terramechanics Simulations**" SAE Technical Paper 10.4271/2023-01-0105 ***Sanskruti Deepak Jadhav***, Ameya Salvi, Krishna Chaitanya Kosaraju, Jonathon Smereka, Mark Brudnak, Venkat N Krovi, David Gorsich